



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,029	02/10/2004	E. Neil Lewis	S0001-002004	9061
7590	01/25/2006		EXAMINER	
Kristofer E. Elbing 187 Pelham Island Road Wayland, MA 01778			LU, TONY W	
			ART UNIT	PAPER NUMBER
			2878	

DATE MAILED: 01/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/776,029	Applicant(s) LEWIS ET AL.	
	Examiner Tony Lu	Art Unit 2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-41 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 21-41 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Objections

Claims 28,30,31 and 40 are objected to because of the following informalities:

As for claim 28, on line 1, the antecedent basis for "the sample" is unclear.

As for claim 30, on lines 1-2, the antecedent basis for "the sample" is unclear.

As for claim 31, on lines 1-2, the antecedent basis for "the sample" is unclear.

As for claim 40, on line 2, the antecedent basis for "the sample" is unclear.

Appropriate corrections and clarifications are required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 21-23,29,30 and 33-35, as understood by the examiner, are rejected under 35 U.S.C. 102(e) as being anticipated by Mao US6166373.

With respect to claim 21, Mao discloses an imaging system and/or imaging method for acquiring images of a two dimensional sample area(T) comprising: a two dimensional spatial detector(CCD, 2.66) having detector elements aligned along a first axis and a second axis, a two-dimensional variable filter(Linear variable filter, 3.70) having filter characteristics that vary in at least one dimension, and being located in an

Art Unit: 2878

optical path between the two-dimensional sample area and the two-dimensional spatial detector, and wherein the system defines the optical path as a two-dimensional optical path that simultaneously conveys radiation from different positions in the sample area to different detector elements through portions of the spatial detector having different ones of the filter characteristics(read col.11, lines 1-15).

With respect to claim 22, per the above discussion, Mao discloses the variable filter is a variable band-pass filter(read col.9, lines 1-25).

With respect to claim 23, per the above discussion, Mao discloses the variable filter is a continuously variable filter(read col.9, lines 40-60).

With respect to claim 29, per the above discussion, a logic responsive to the spatial detector for combining a series of images detected from the spatial detector to obtain full-range spectral images is inherently included in order to provide a complete spectrograph imaging from the system(read col.2, lines 40-50 and col.8, lines 35-65).

With respect to claim 30, per the above discussion, Mao discloses a first stage optic(24) between the sample area and the detector.

With respect to claim 33, per the above discussion, Mao discloses the spatial detector is an integrated semiconductor array detector(CCD).

The imaging system of Mao inherently performs the claimed method steps of claims 34,35,37 and 38 since all the rejected claims above include all the limitations set forth in the claimed method steps in claims 34,35,37 and 38.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 31, 36 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mao US6166373.

With respect to claims 31 and 40, per the above discussion, note that Mao discloses a logic(CPU, 34) and a display(monitor, see fig.1) but Mao fails to disclose whether or not the logic is responsive to the detector to selectively display spectral information that relates to at least one predetermined substance in the sample area.

Although Mao lacks a clear teaching of selectively display spectral information that relates to at least one predetermined substance in the sample area, selectively display information in order to emphasize certain observations of the sample area would have been obvious to one of ordinary skill in the art.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Mao accordingly in order to provide desired displayed information for the system.

With respect to claim 36, per the above discussion, although Mao lacks a clear teaching of the system being used on pharmaceutical composition, and the descriptive image of the composition, selecting a desired composition/substance for obtaining descriptive image information thereof would have been obvious involves a routine skill

in the imaging art. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the proposed system of Mao discussed above accordingly in order to provide more wide applicability of the system.

Claims 24-28,32,39 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mao US6166373 in view of Schechter US5880830.

With respect to claims 24-27, Mao fails to disclose an infrared and/or near infrared and/or ultraviolet and/or visible light source and it's associated detector.

Schechter discloses a spectral imaging system and/or imaging method having an infrared and/or near infrared and/or ultraviolet and/or visible light source(element 20, read col.2) and its associated detector.

Although Mao lacks a clear teaching of a light source, selecting a specific light source in order to enhance the desired images would have been a mere obvious intended purposes to one of ordinary skill in the art.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Mao's system by utilizing the light source and the associated detector taught by Schechter in order to provide more reliable image information from the system.

With respect to claim 28, per the above discussion, Mao fails to disclose means for moving the sample area relative to the spatial detector.

Schechter discloses means(10,12,13) for moving the sample area(18) relative to the spatial detector.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Mao by supplying means for moving the sample area relative to the spatial detector taught by Schechter in order to provide a desired fashion of scanning and/or inspecting the sample area.

With respect to claims 32 and 39, per the above discussion, Mao discloses a computer(34) for controlling the system but fails to teach a multivariate spectral analysis logic.

Schechter discloses a multivariate spectral analysis logic(col.7).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Mao by utilizing a multivariate spectral analysis logic taught by Schechter in order to provide in-depth information analysis of the detected images.

With respect to claim 41, per the above discussion, Mao fails to disclose a reference substance in the sample area.

Schechter discloses a reference is being used for comparison/classify purposes(read.col.6).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Mao by utilizing a reference as suggested by Schechter in order to provide a more accurate analysis of the detected image, if so desired.

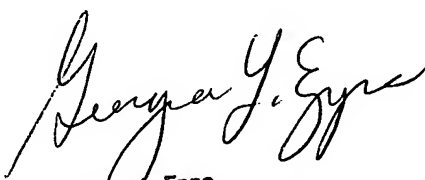
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Lu whose telephone number is 5712728448. The examiner can normally be reached on M-F 9:00am- 6:00pm.

Art Unit: 2878

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on 5712722328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TL



Georgia Epps
Supervisory Patent Examiner
Technology Center 2800